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Age Assessments of Asylum Applicants at the Section of Forensic Medicine in Copenhagen

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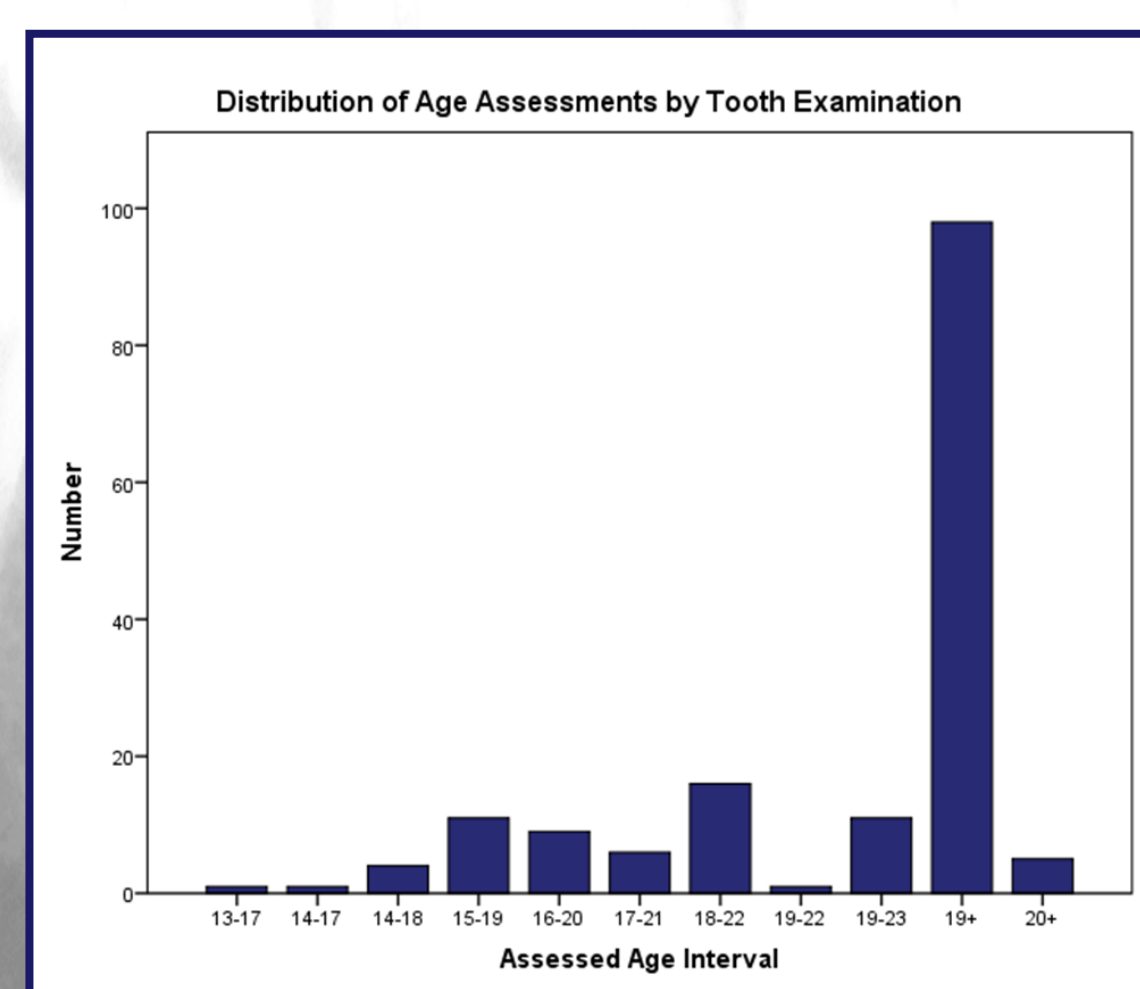
Introduction:

At the Section of Forensic Medicine in Copenhagen 175 (163 male, 12 female) forensic age estimations of asylum applicants were performed in 2012. The forensic age estimations comprise three parts: A physical examination performed by a forensic pathologist, a radiological examination of the left hand and wrist performed by a radiologist as well as a radiological examination performed by a forensic odontologist. A Tanner stage is given at the physical examination and at the two latter an age or an age interval are given respectively.

This poster presents the results from the three individual examinations as well as the resulting combined assessment.

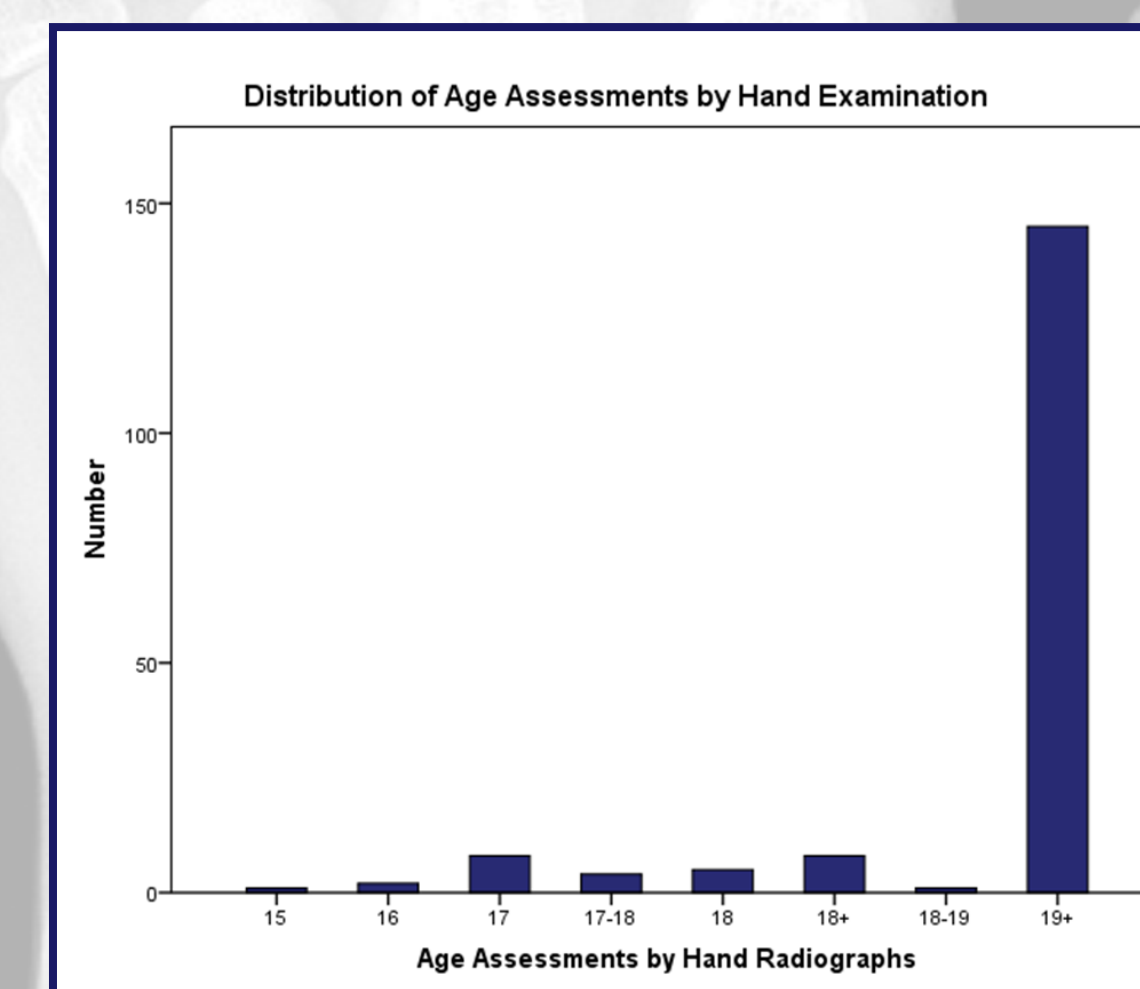
Dental radiological examination

- The radiological estimation of tooth maturity was performed at the Department of Forensic Pathology by a forensic odontologist.
- Third molar development was assessed and scored following the 10-point staging technique developed by Gleiser and Hunt and modified by Köhler et al.
- The distribution of the assessed age intervals can be seen on the graph below:



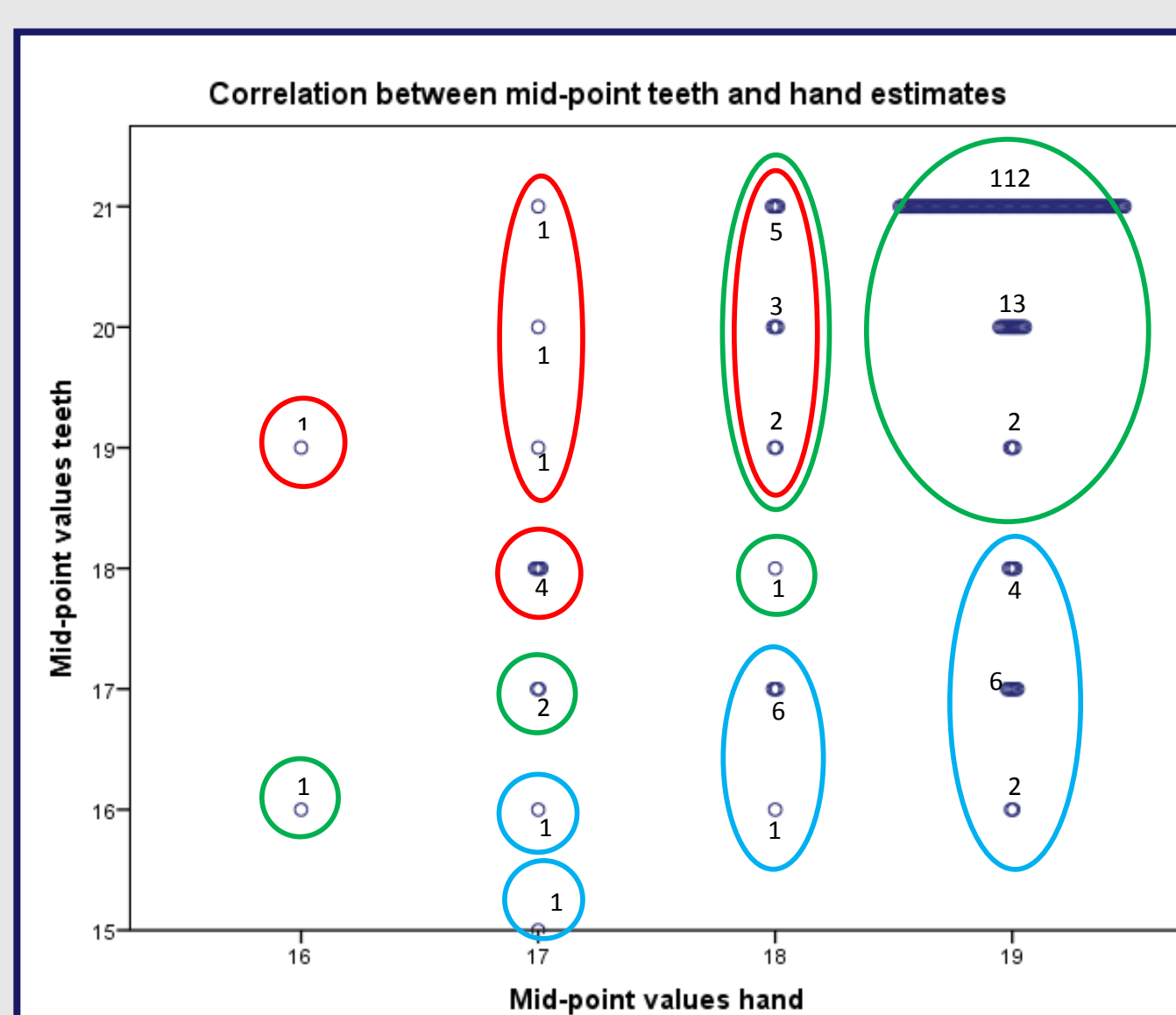
Left hand/wrist radiological examination

- The radiological examination of the left hand and wrist was performed by a radiologist employed at Rigshospitalet (the Copenhagen University Hospital).
- The maturity is assessed by means of the atlas of Greulich and Pyle.
- The distribution of the assessed ages can be seen on the graph below:



Combined assessment

- The final assessed age interval is mainly based upon the hand/wrist and dental examinations.
- The correlation between the mid-point values of the hand/wrist radiological assessments and the dental radiological assessments are displayed on the graph below and an explanation to the graph can be found to the right:



The correlation between mid-point teeth and hand estimates explained:

The areas circled in blue represent the cases where the estimated age by hand/wrist radiography was *higher* than the estimated age by dental radiography.

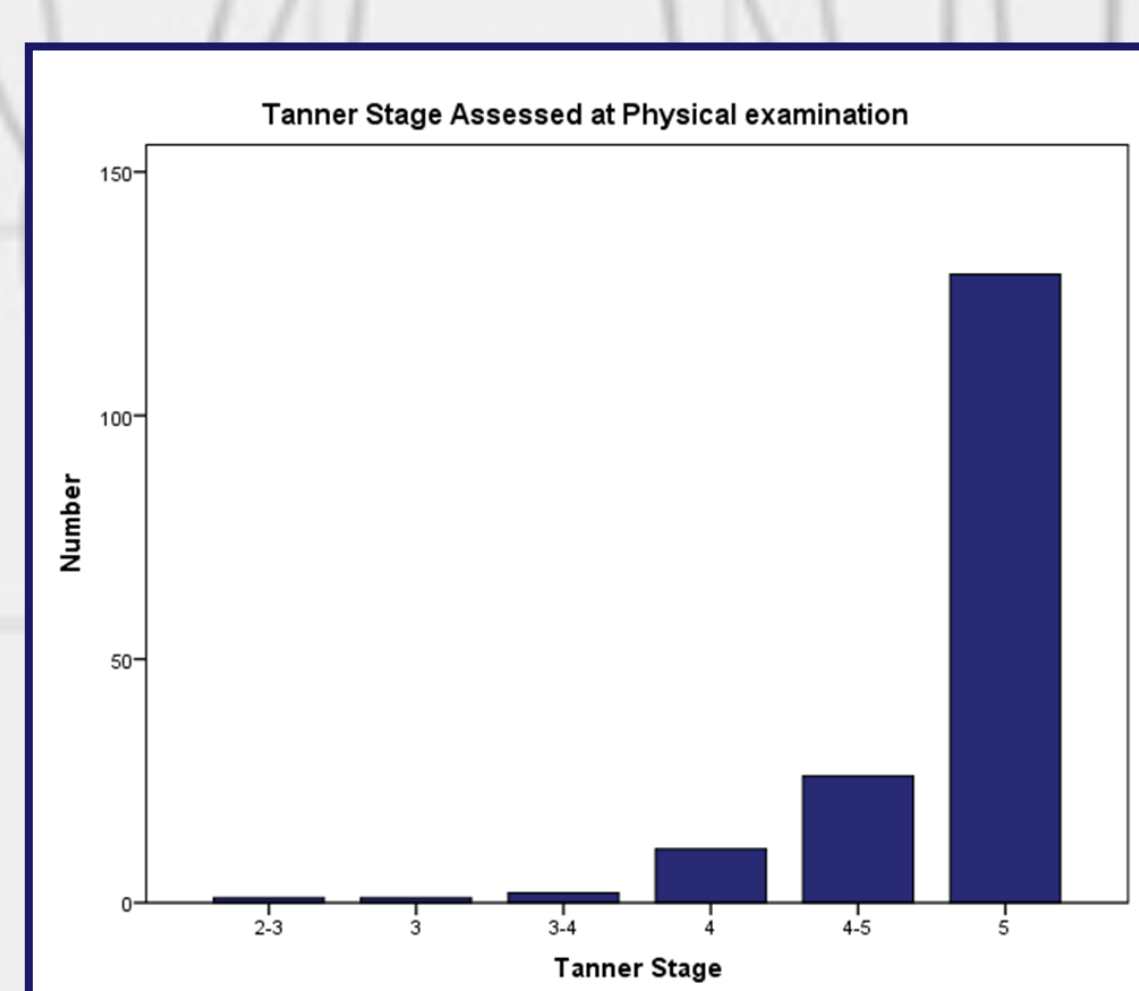
The areas circled in green represent the cases where there was agreement between the two estimates.

The areas circled in red represent the cases where the estimated age by hand/wrist radiography was *lower* than the estimated age by dental radiography.

The area circled in red and green represents cases where the mid-point dental assessment was higher than the mid-point hand/wrist assessment. This discrepancy can partly be explained by the fact that the hand/wrist assessment was '18 years or older' and thus a higher mid-point dental assessment is not necessarily a discrepancy.

Physical examination

- The physical examination was performed at the Department of Forensic Pathology by a forensic pathologist.
- At the physical examination the stage of sexual maturity according to Tanner is estimated. Additionally the pathologist looks for signs of present or former disease as well as special features such as scars.
- The distribution of the estimated Tanner stages can be seen in the graph below:



Conclusions

- Overall the agreement between the estimates of the separate examinations was good.
- When there were discrepancies it was generally seen that the odontological estimate showed a lower age than the respective radiological examination of the hand and wrist.
- In 131 out of the 175 cases it was estimated that the examined asylum applicant was 18 years or older.
- The graph to the right shows the distribution of the combined assessed age intervals:

